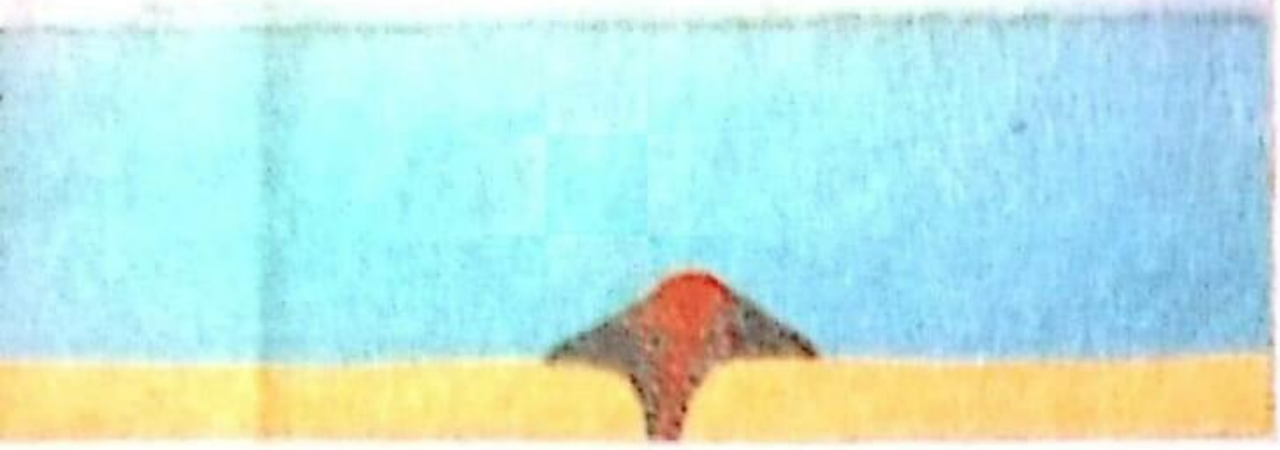
LADYBIRD LEADERS

islands

HOW A VOLCANIC ISLAND IS FORMED

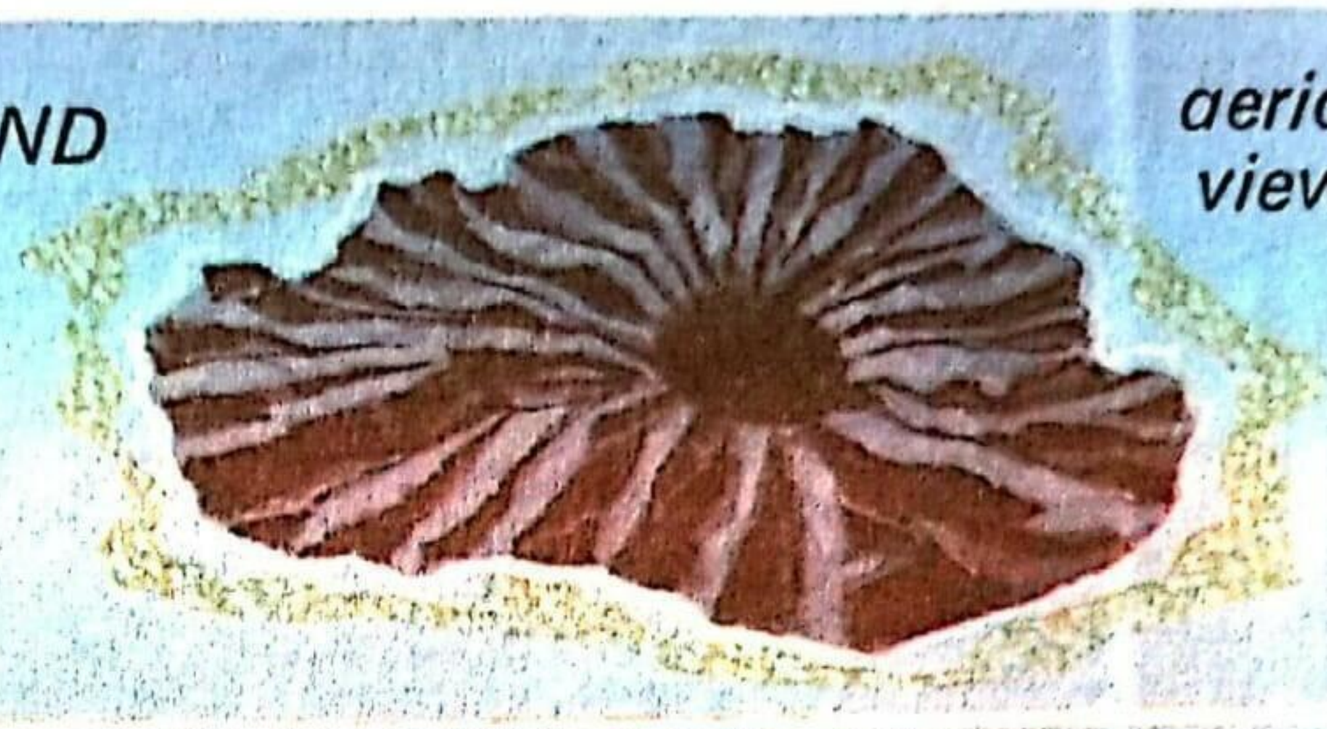


1 Lava breaks through sea bed



2 Lava builds up on the sea bed

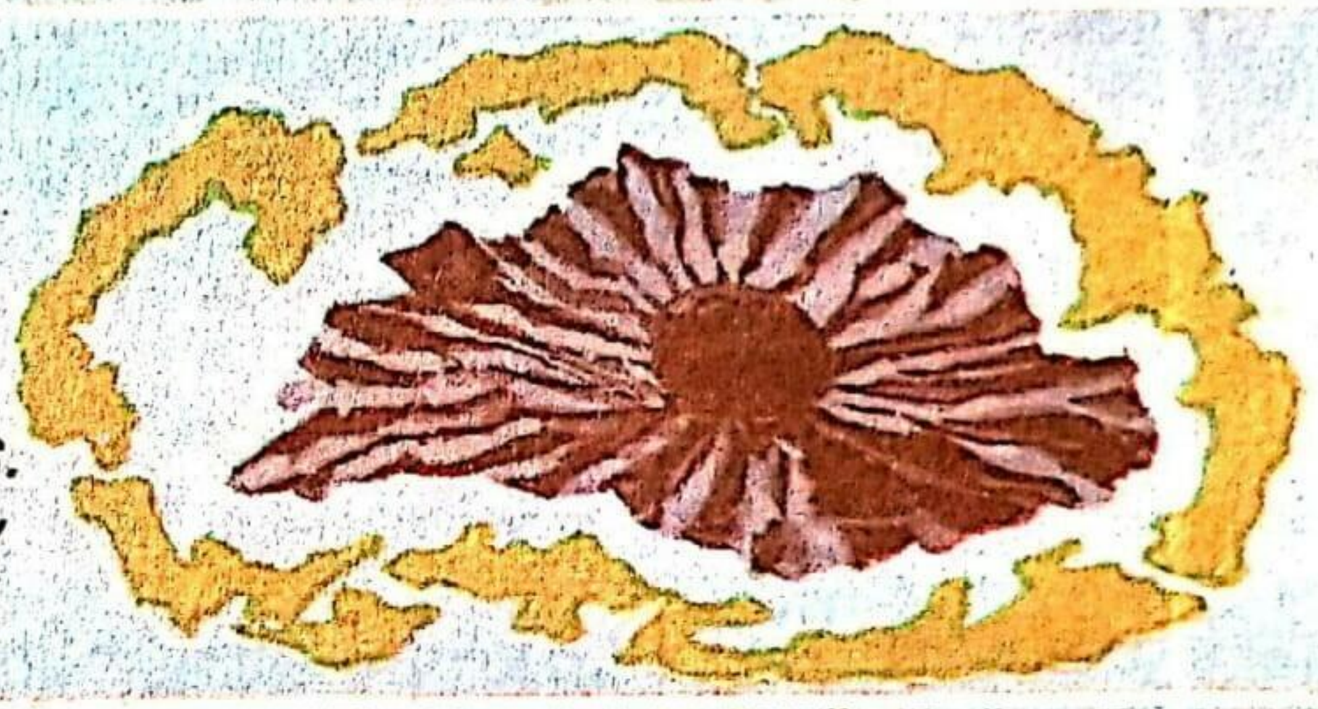
ONE WAY A CORAL ISLAND MAY BE FORMED



aerial view

1 Coral forms around a volcanic island to form a fringe reef.

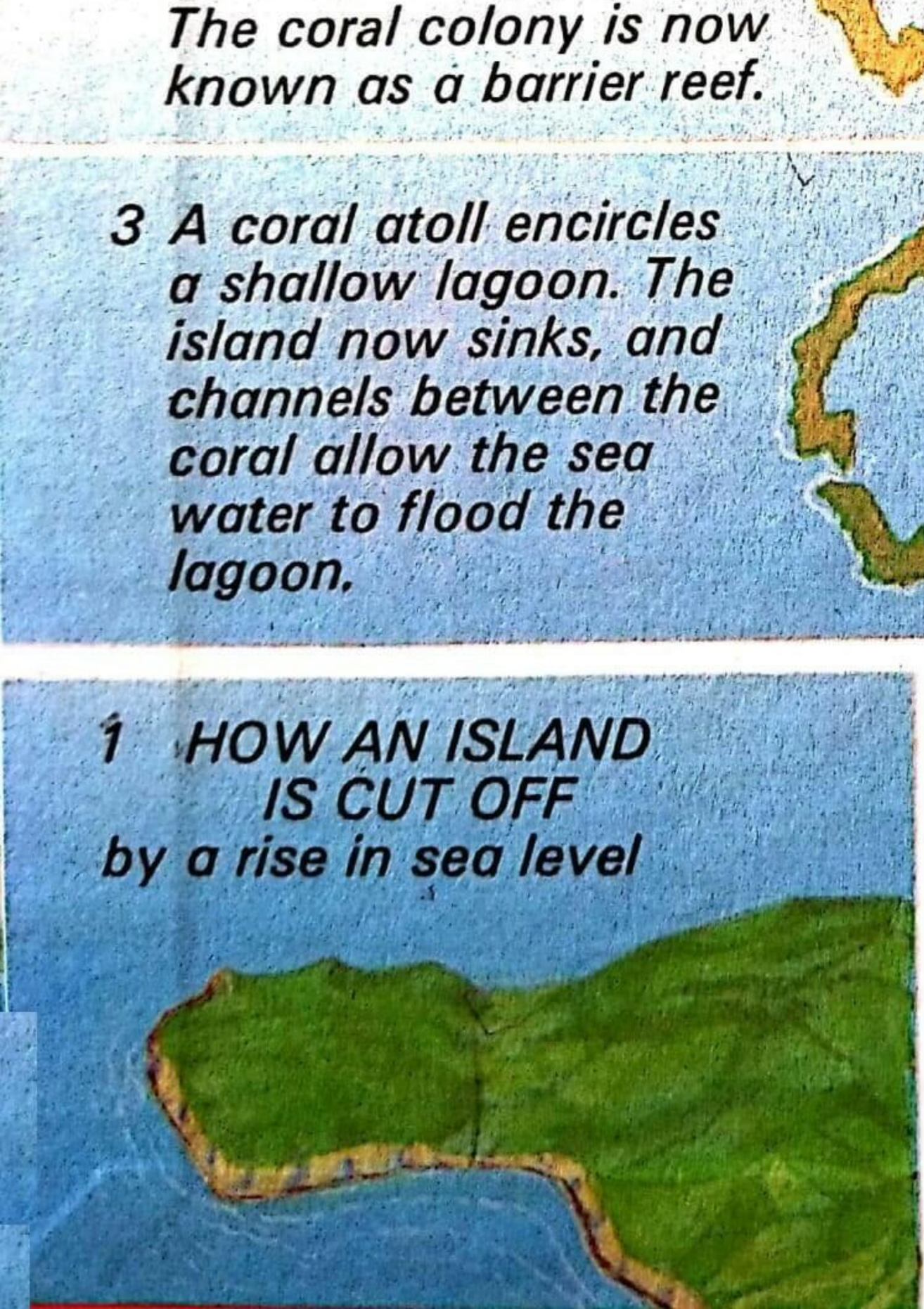
2 The island starts to sink and becomes smaller. The channel between the island and the coral colony widens. The coral colony is now known as a barrier reef.



3 A coral atoll encircles a shallow lagoon. The island now sinks, and channels between the coral allow the sea water to flood the lagoon.



1 HOW AN ISLAND IS CUT OFF by a rise in sea level



2



3 Volcano breaks through the sea



4 An island is born

side view

Volcanic island

Coral growth

Coral colony

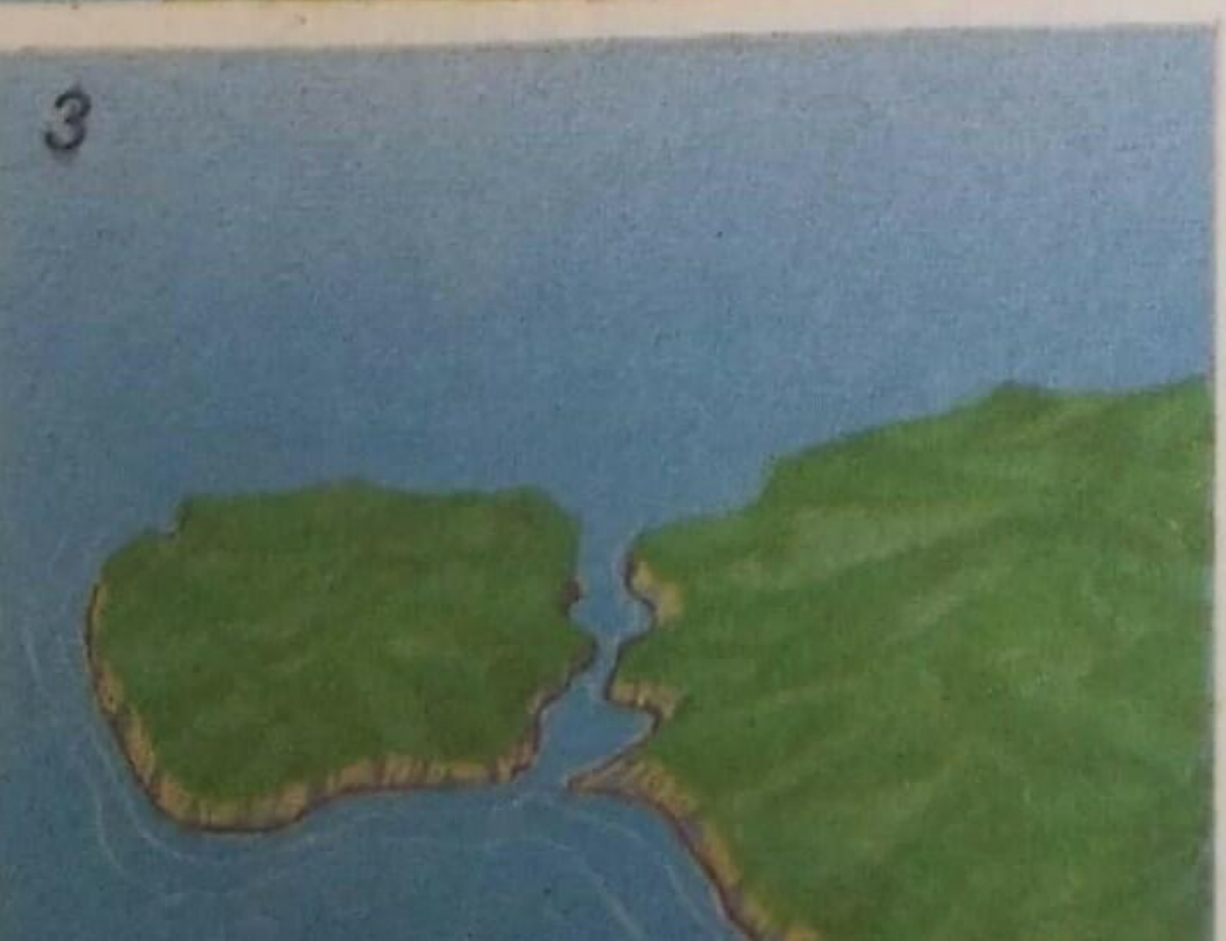
Channel widens

Island sinks

Coral atoll

Shallow lagoon

Island now sunk





to teachers and parents

This is a LADYBIRD LEADER book, one of a series specially produced to meet the very real need for carefully planned *first information books* that instantly attract enquiring minds and stimulate reluctant readers.

The subject matter and vocabulary have been selected with expert assistance, and the brief and simple text is printed in large, clear type.

Children's questions are anticipated and facts presented in a logical sequence. Where possible, the books show what happened in the past and what is relevant today.

Special artwork has been commissioned to set a standard rarely seen in books for this reading age and at this price.

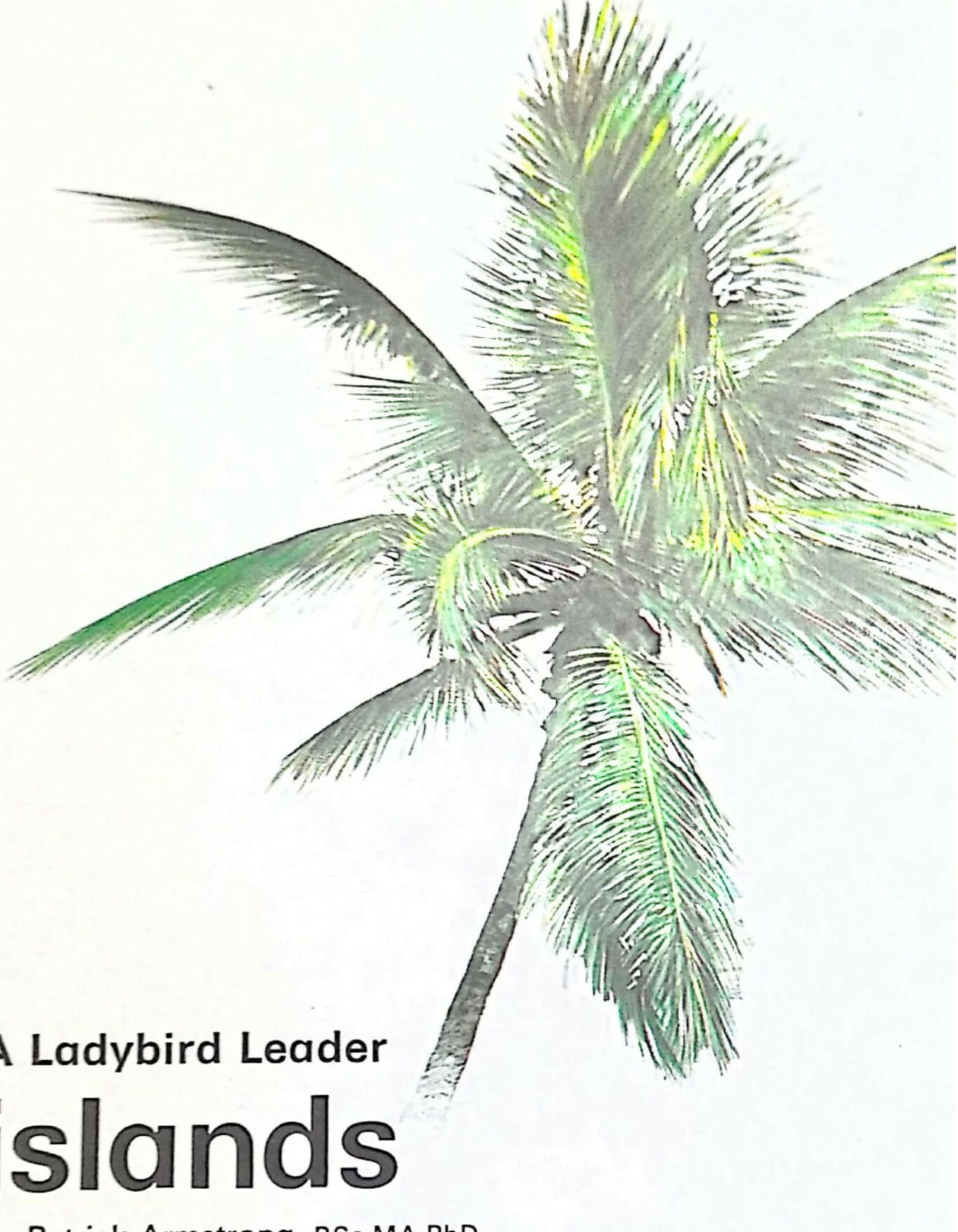
Full colour illustrations are on all 48 pages to give maximum impact and provide the extra enrichment that is the aim of all Ladybird Leaders.

Acknowledgment

The publishers wish to acknowledge the help given by Mr Hugh Brown, Warden at Beinn Eighe Reserve, in providing reference photographs for the illustrations on pages 20-21, and Cable and Wireless Ltd for reference material for page 39.

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A Ladybird Leader

islands

by Patrick Armstrong, BSc MA PhD

with illustrations by

Gerald Witcomb, MSIAD

Ladybird Books Loughborough



Islands

An island is a piece of land with water all round it.

Greenland and Australia are very large islands.

150°

Marshall Is.

Borneo

Celebes

0°

New Guinea

Java

Solomon Is.

Tropic of Capricorn

AUSTRALIA



In the Pacific Ocean
there are thousands of tiny islands.



How some islands form

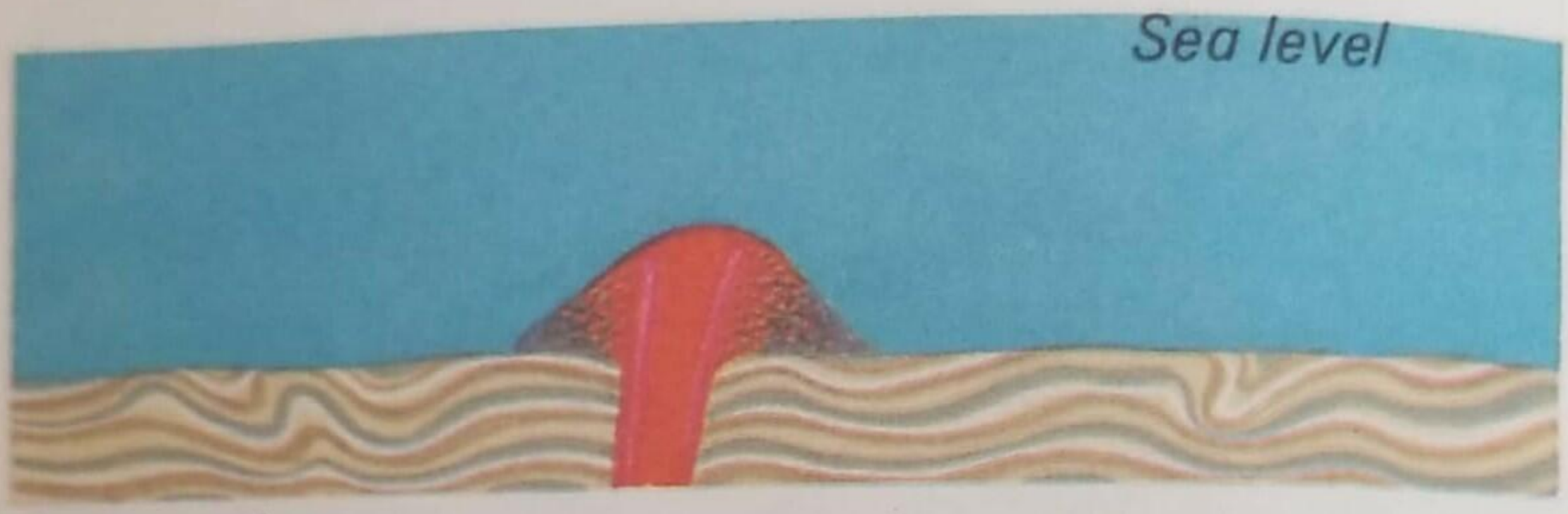
Some islands are really parts
of nearby large land masses
that have been cut off
by a rise in sea level.

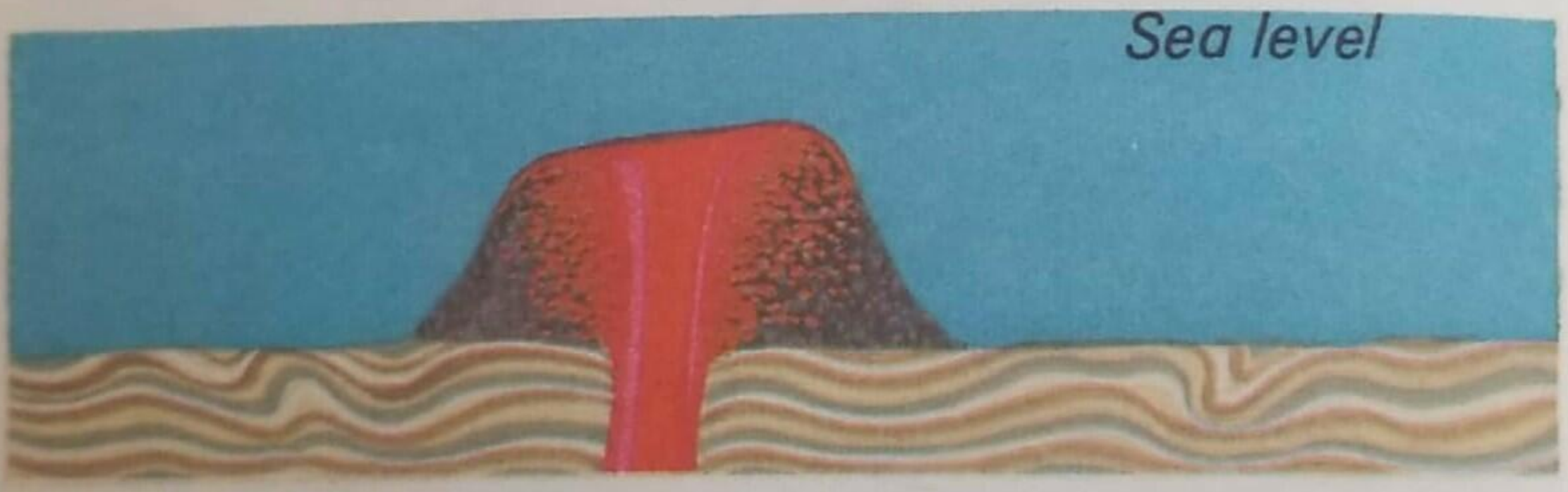
Long ago Britain was probably
part of the continent of Europe
and Ireland was joined to Britain.

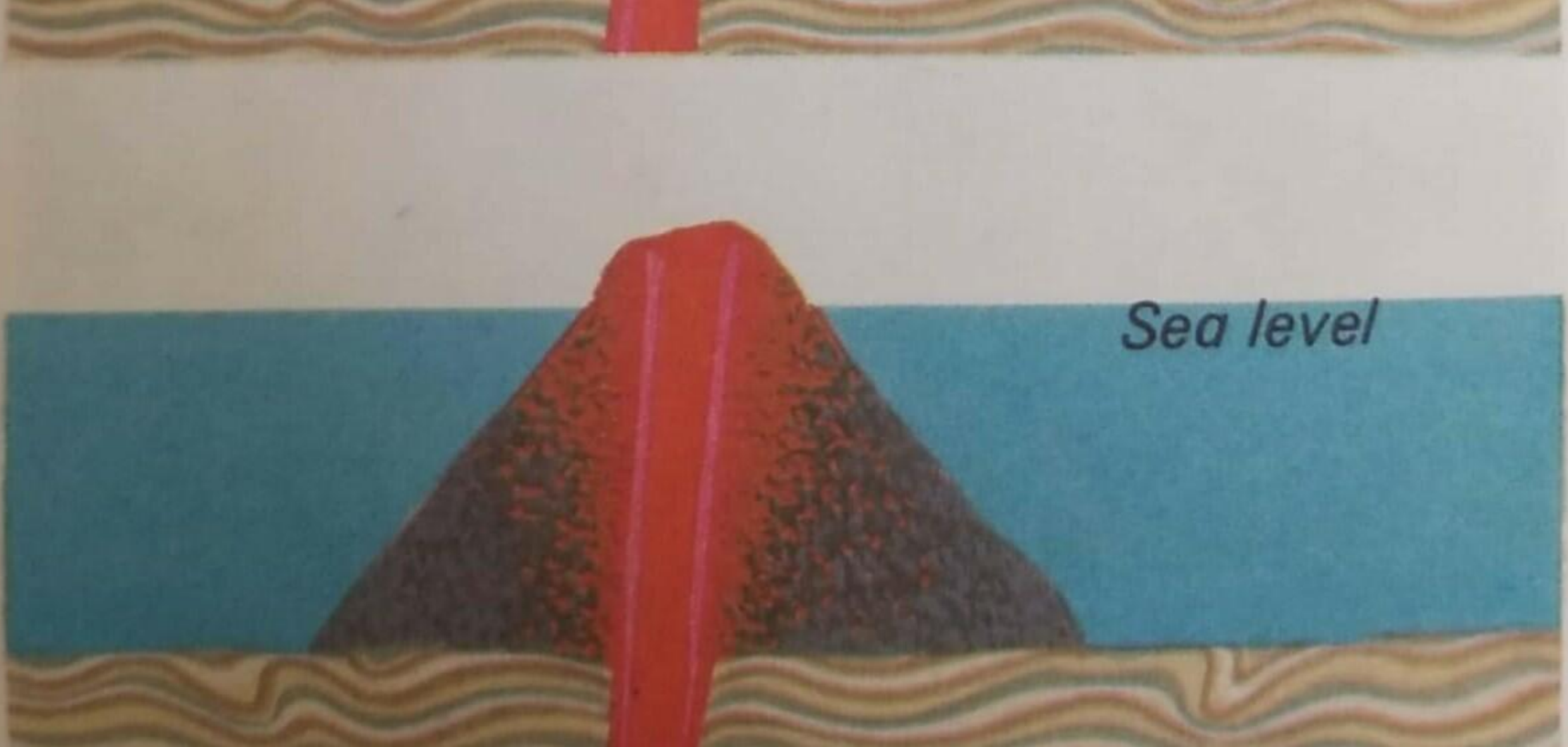

British Isles
EUROPE

Volcanic islands

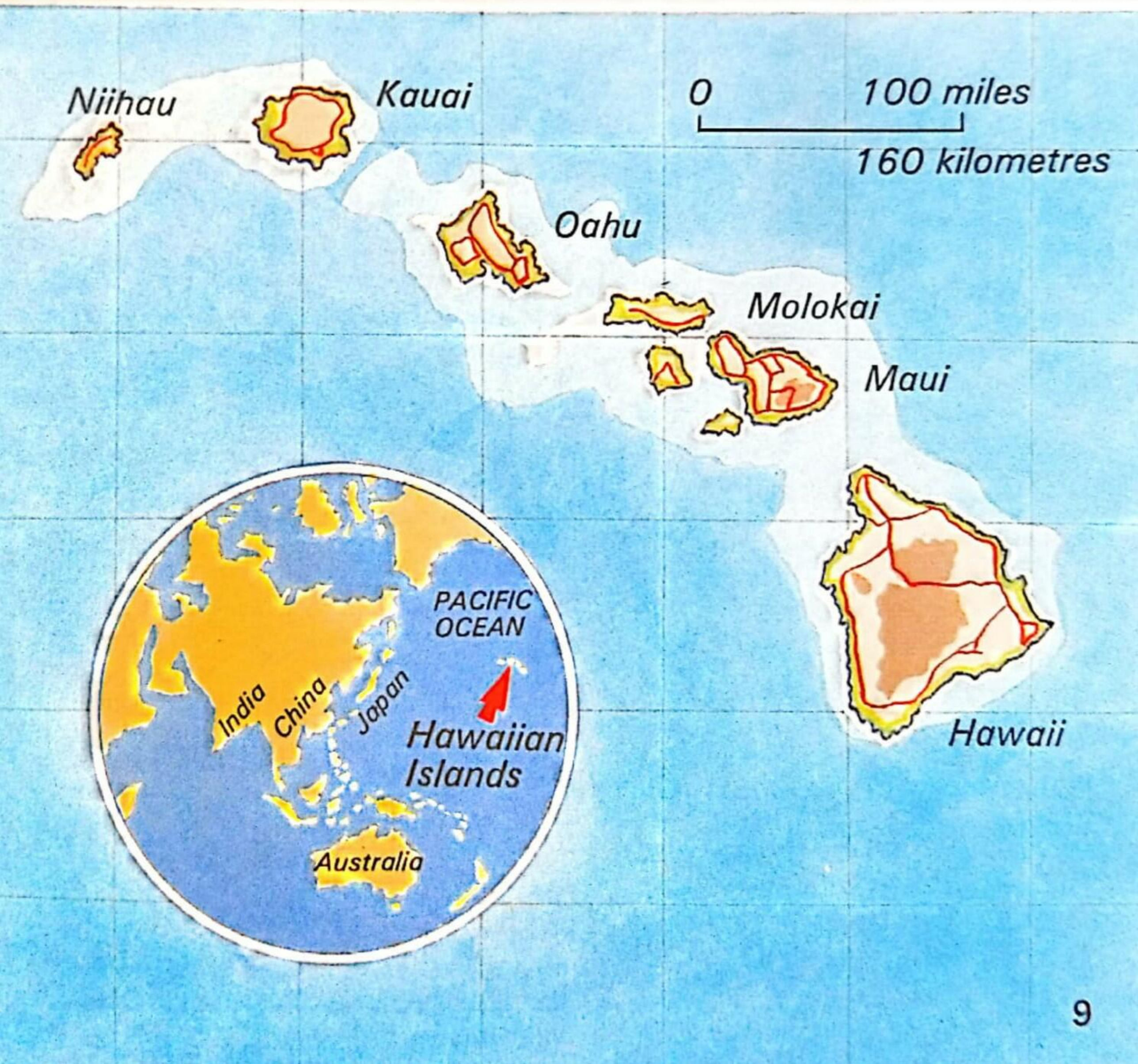
Other islands have been formed
by volcanoes growing up
from the bottom of the sea.







Molten rock or *lava*
comes out of the sea-bed.
It turns into solid rock
as it reaches the cold water.
The Hawaiian islands formed
in this way over millions of years.



Aerial view of Aldabra





Large Fungus Coral

Coral islands

Coral islands form
as the result of the growth
of creatures called coral *polyps*.
These small animals live
in warm shallow seas.
They have hard skeletons of lime
that form rock when the polyps die.
Sometimes, over thousands of years
of coral growth, ring-shaped
or horseshoe-shaped islands form.
They are called *atolls*.

Plants and animals

On coral and volcanic islands
far from other land masses,
there are few types of plants
or land animals.

Some small insects and seeds
may have been blown to an island
by the wind.

Coconuts can float on the sea
for some time
and may grow into trees
when thrown up onto an island
by the waves.

An island explodes

Scientists were able to study
the time it took for plants
and animals to come back
to the island of Krakatoa
after the volcanic explosion of 1883.
Everything on the island
was killed by the eruption.

By 1908 there were 13 kinds of birds
and 115 types of plants
living on the island.
By 1933 there were 30 kinds of birds
and 271 types of plants.



Each ring represents 590 kilometres



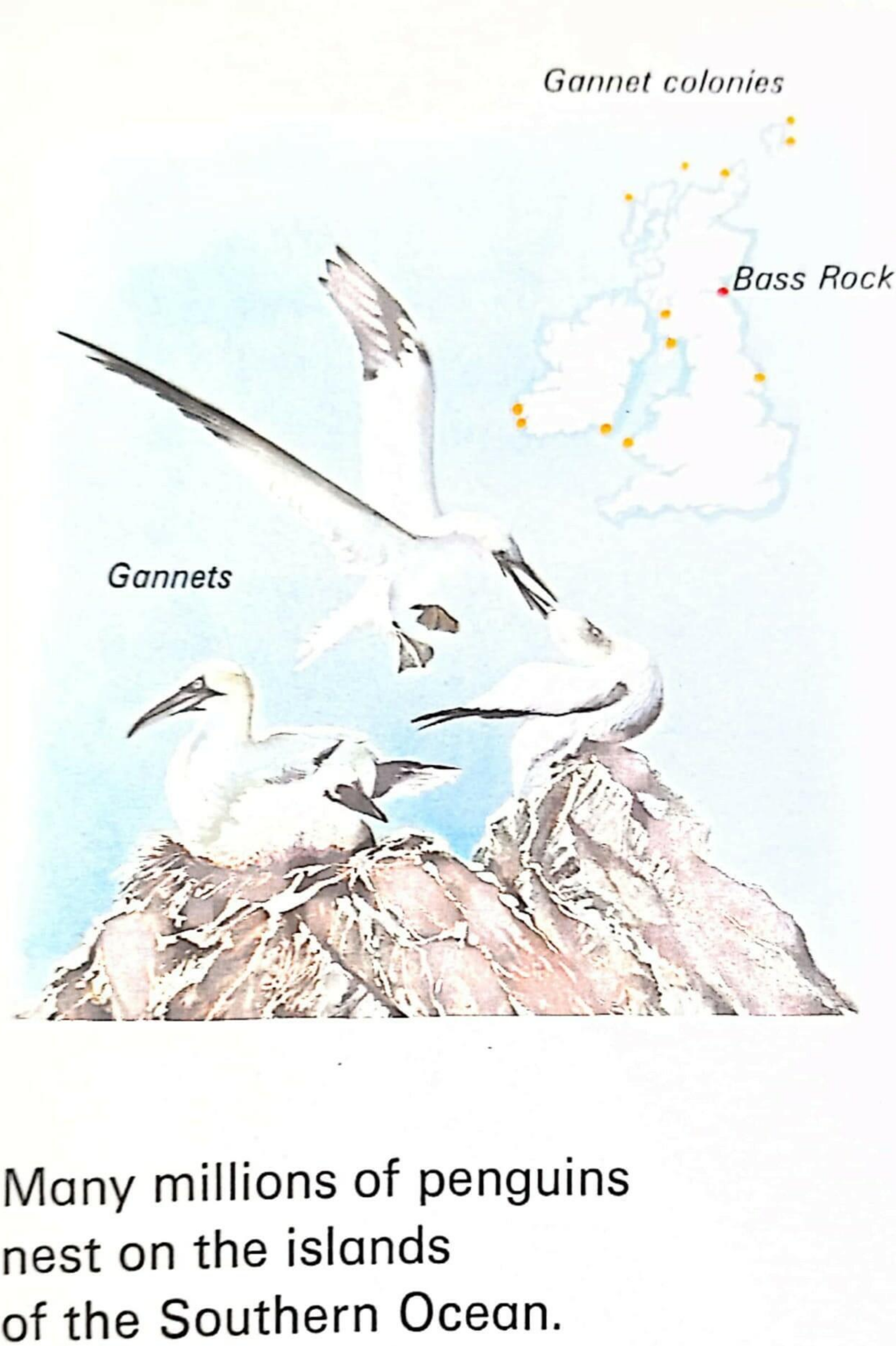
Island sea-bird colonies

Penguins and auks can swim very well, up to 30 miles (48 km) an hour.

Other sea-birds such as gulls and gannets have powerful wings, and are expert flyers.

They can easily reach islands.

There are few animals to eat eggs or chicks so many sea-birds nest on islands.



Many millions of penguins
nest on the islands
of the Southern Ocean.
Several thousand pairs of gannets
breed on the Bass Rock
in the Firth of Forth, Scotland.

Flightless birds

Some land birds that have
reached islands
have lost the power of flight.
They cannot leave
their island home.

On Gough Island in the South
Atlantic there lives a *Flightless Rail*.
It looks rather like a moorhen.



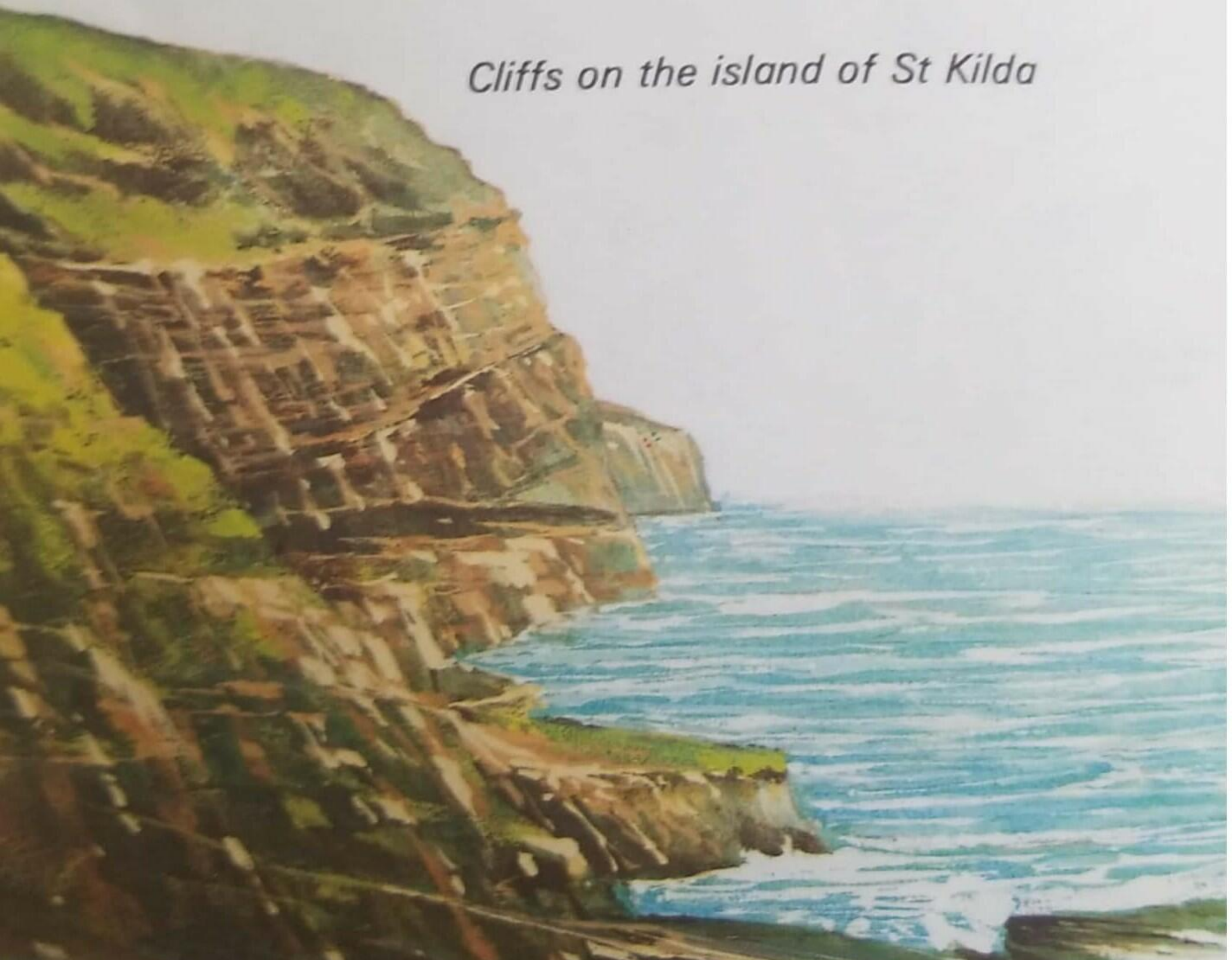


A Flightless Rail

Unique plants and animals

On many islands there are plants and animals that live nowhere else. The Lundy cabbage is a plant found only on the Isle of Lundy in the Bristol Channel.

Cliffs on the island of St Kilda



On St Kilda in the North Atlantic
mice and wrens are found
that are different
from those elsewhere.

St Kilda Mouse



St Kilda Wren

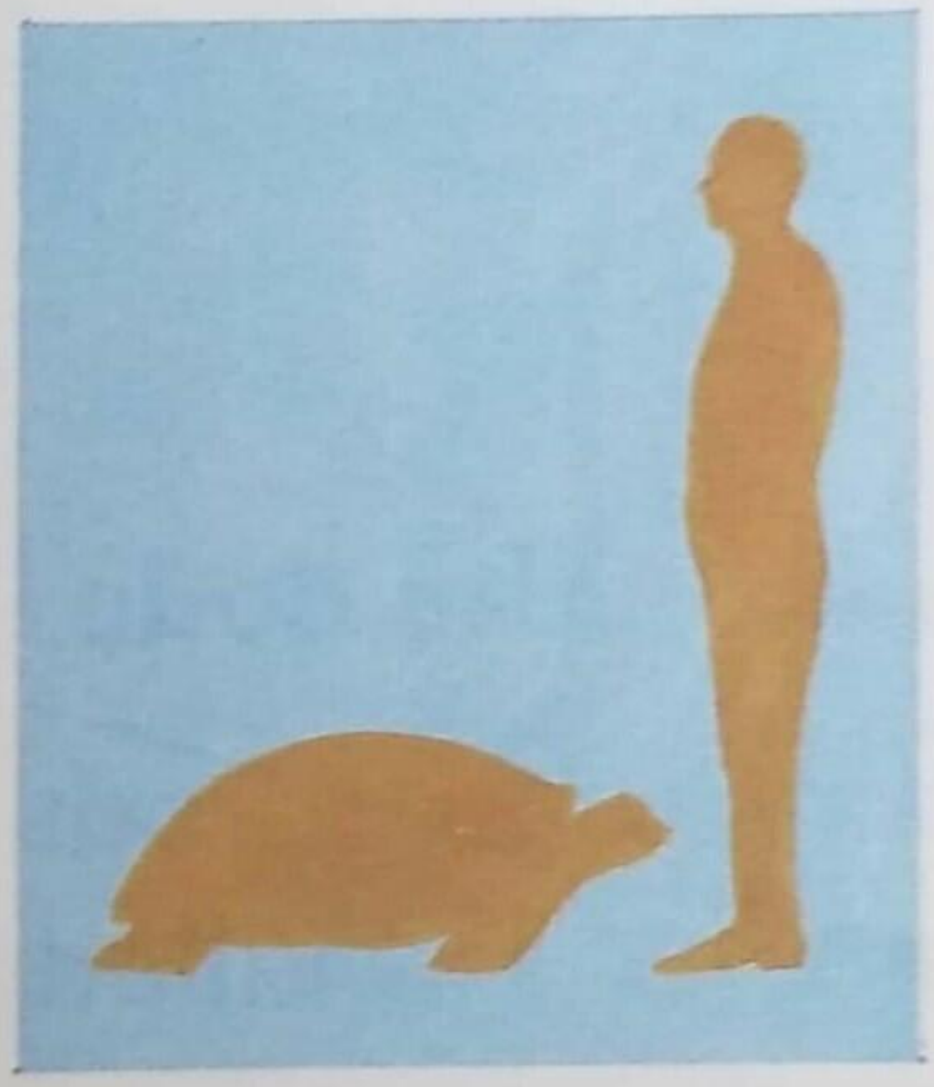


Some strange island creatures

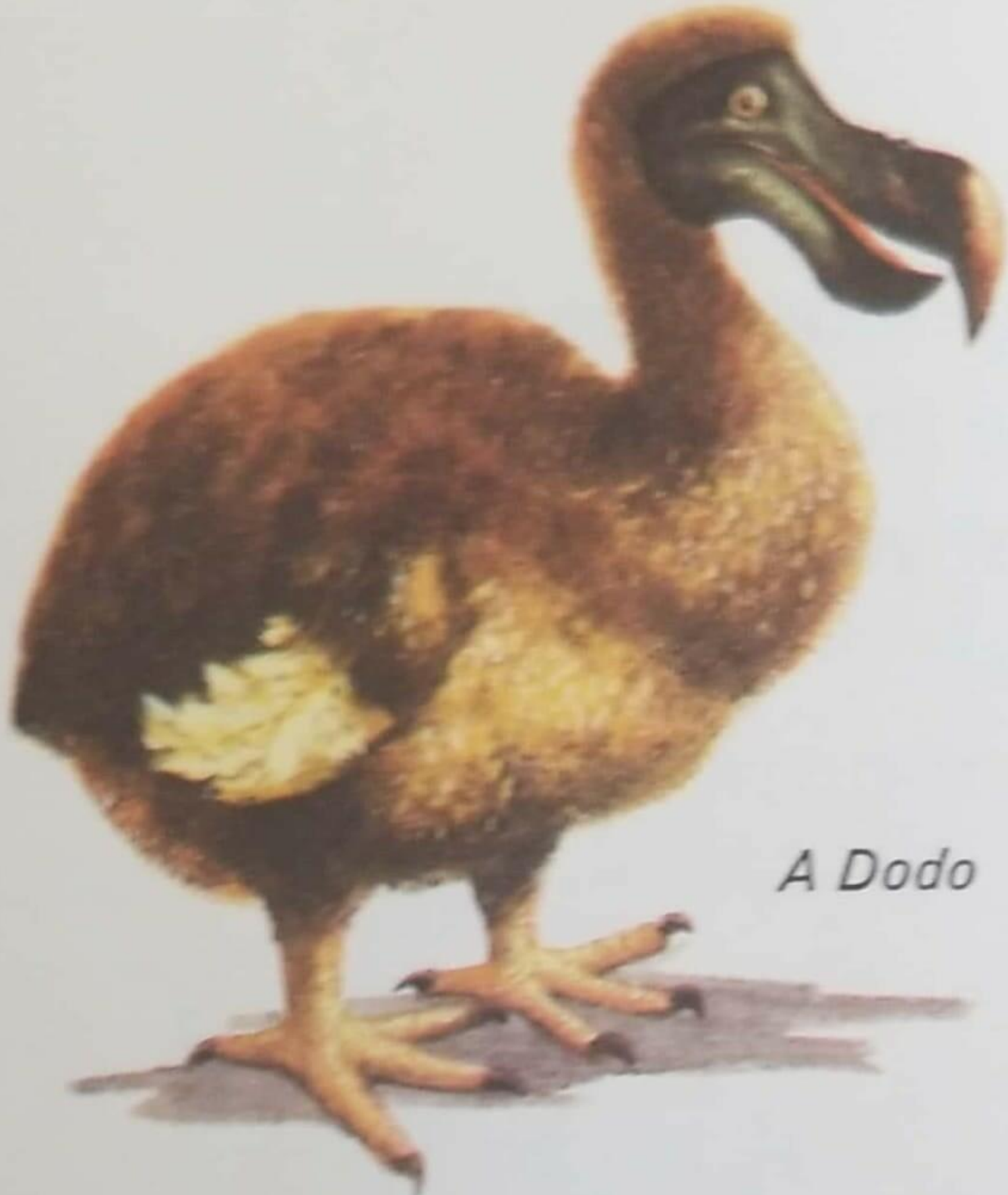
Some of the creatures and plants that live on islands are very strange.

On the Galapagos Islands
in the Pacific there are
tortoises that weigh 225 kilograms,
four-eyed fish,
and cacti that grow like trees.





Comparative size



A Dodo



Dead as the dodo!

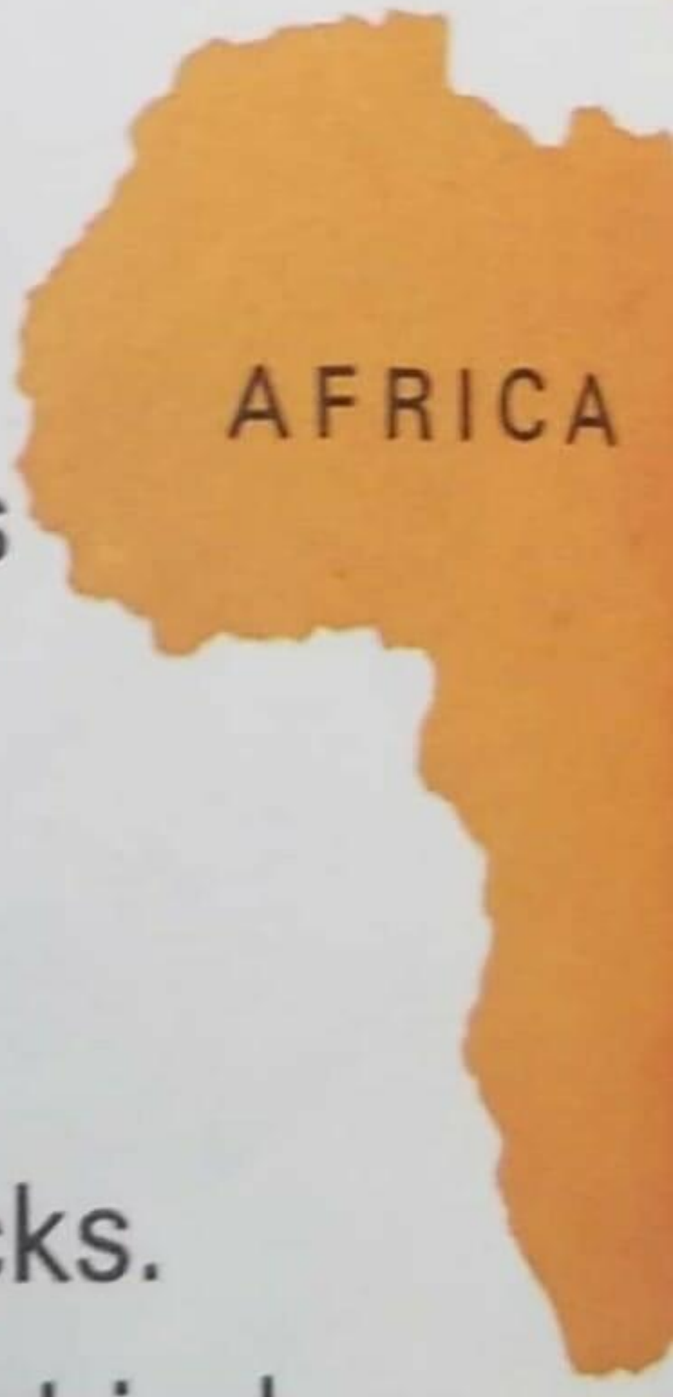
For many hundreds of years
seamen have killed for food
birds that lived on islands.

Rats came ashore
from visiting ships and wrecks.

Sometimes cats were left behind.

Cats killed many birds
and other animals.

Rats ate eggs and chicks.



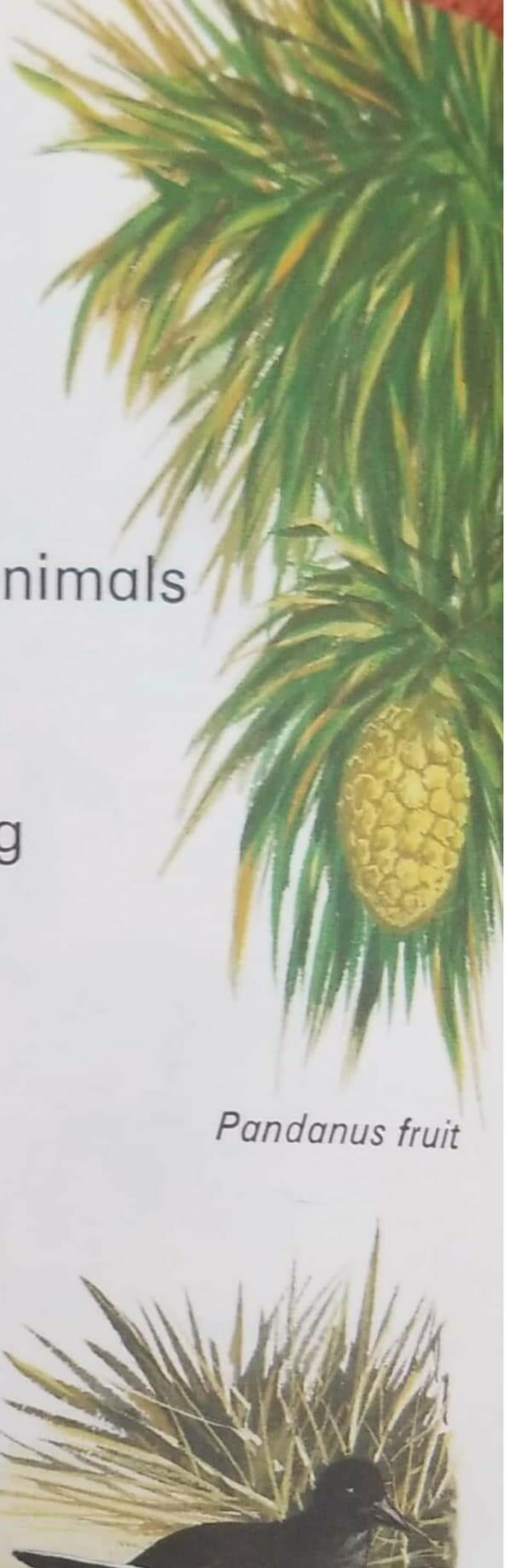


Now many rare creatures,
like the dodo
that once lived on Mauritius,
are *extinct* (there are none left).

Island reserves

Now some islands
have been protected
as nature reserves
so that their scenery
and rare plants and animals
may be preserved.

No animals are killed
and there is no mining
or timber cutting
on these islands.

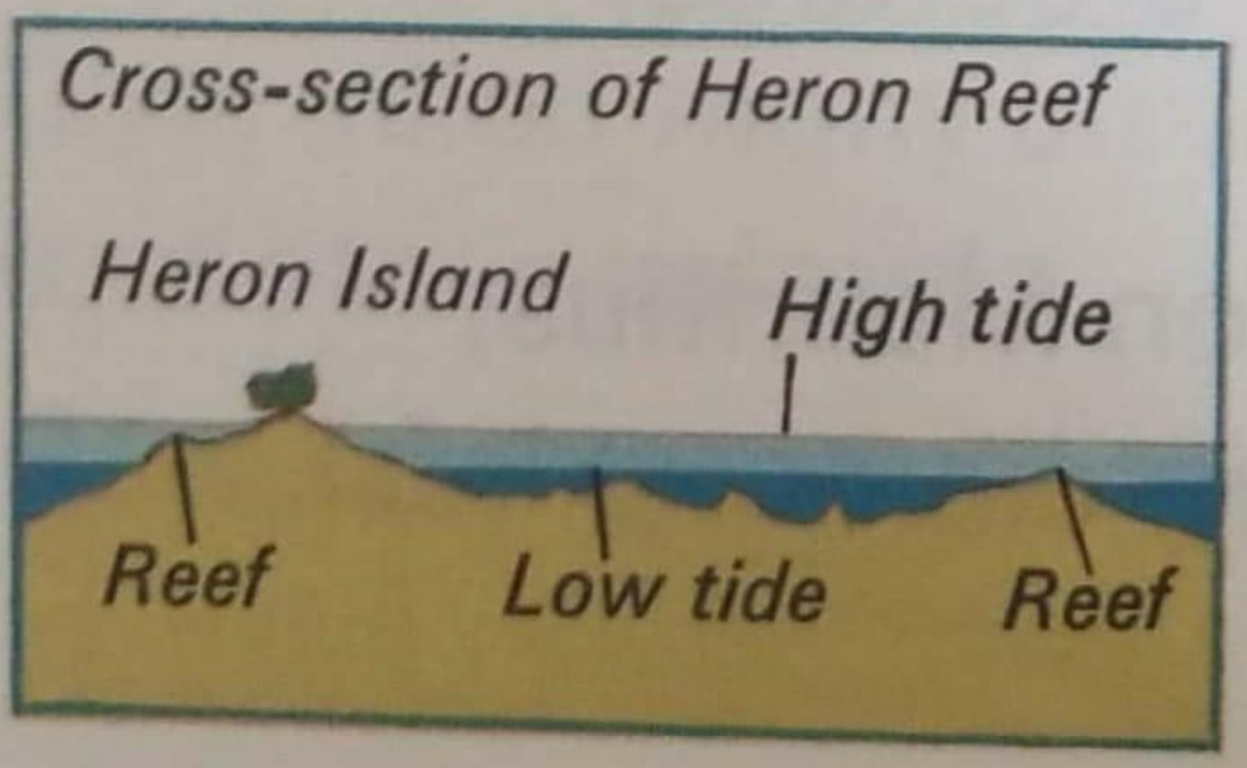


Pandanus fruit





Muttonbird





Giant tortoises

Heron Island off the coast
of Australia and some islands
of the Seychelles
are protected in this way.



Island travel

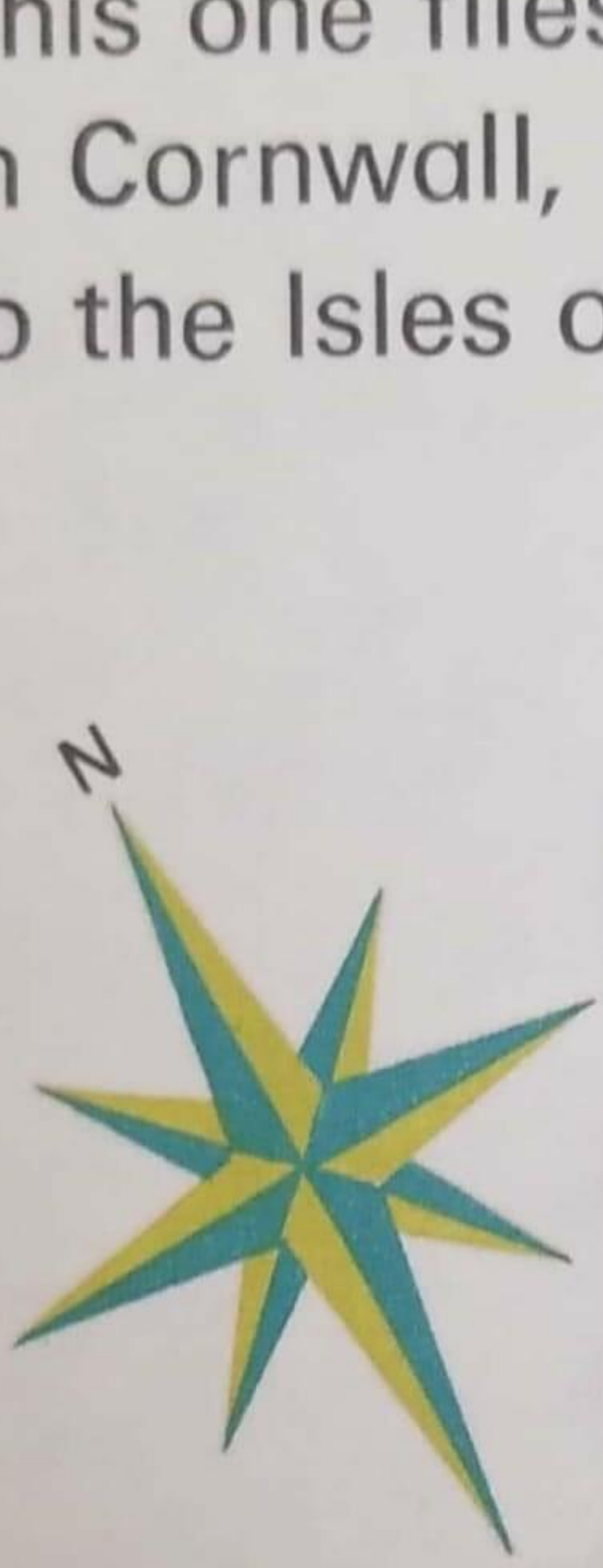
People often travel to islands by boat.

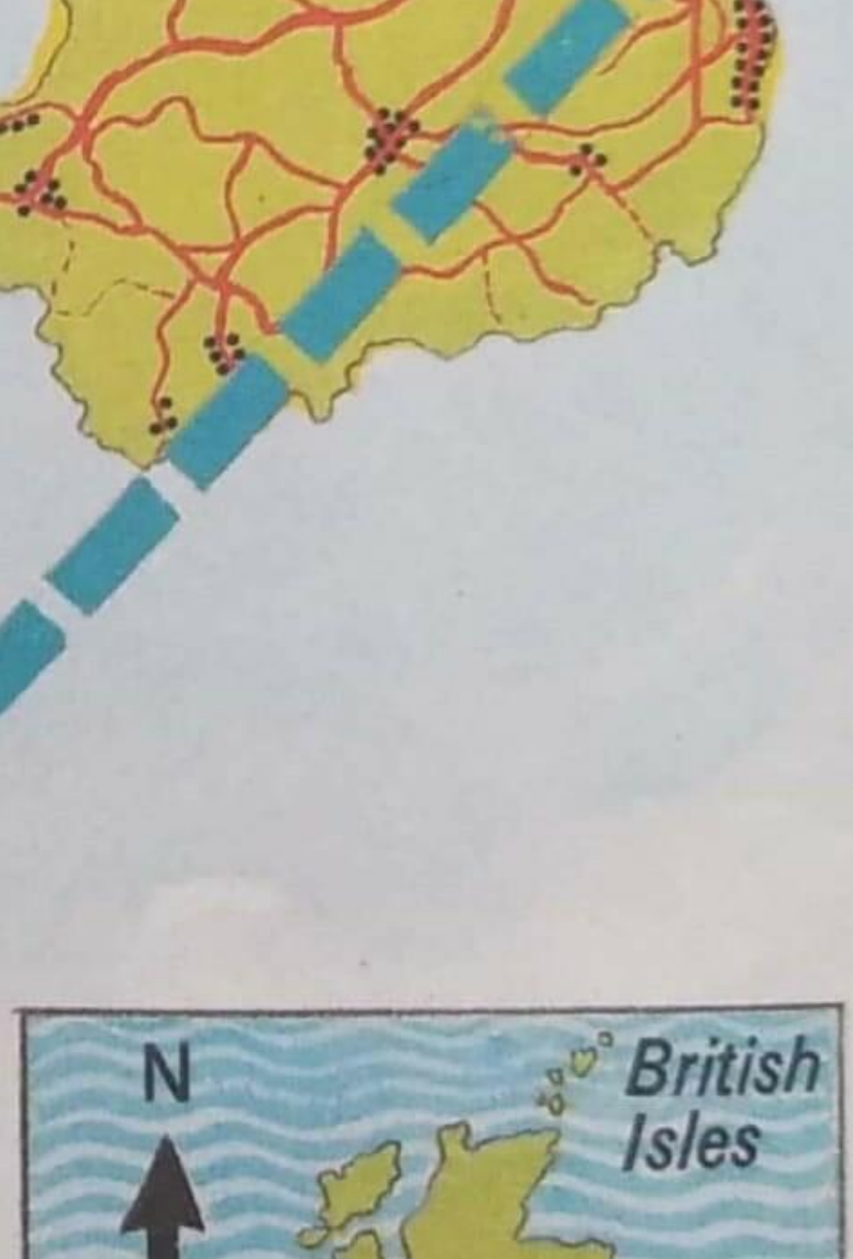
Some islands only have mail and goods brought by boat once or twice each year.

Tristan da Cunha
(Sometimes called the
loneliest island in the world)



Another way of reaching islands
is by aircraft.
Helicopters are sometimes used.
This one flies from Penzance
in Cornwall, England
to the Isles of Scilly.





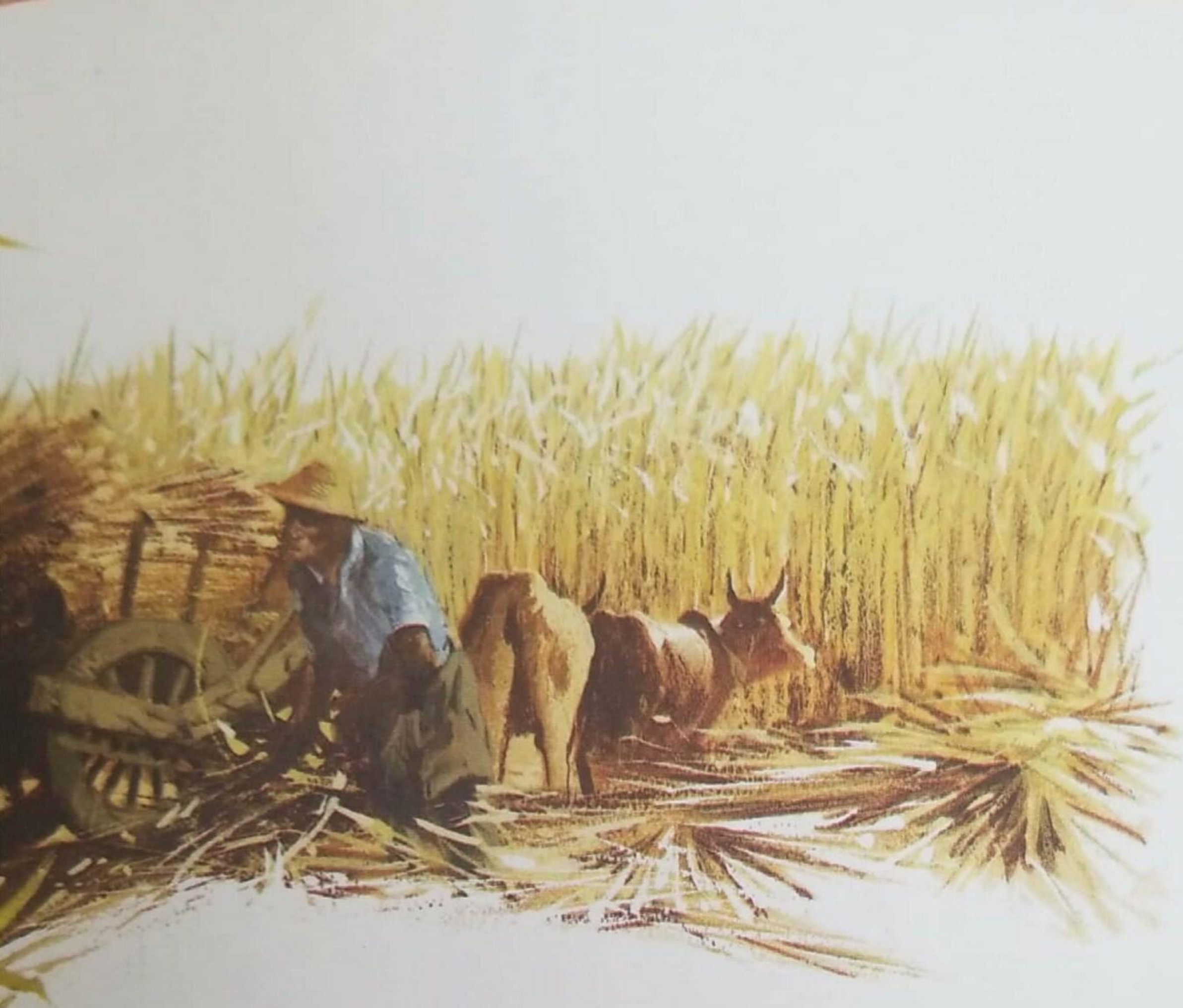

British
airways
G-BCEB

Fishing

Because they have water
all around them,
some island dwellers are fishermen.
They may eat the fish themselves
or sell it.

If it is to be sold
it will probably have to be
frozen, dried or canned.





Farming

Where crops can be grown
and animals kept
some islanders are farmers.

On some islands in the Pacific
pigs are kept.

On islands in the tropics
such as Mauritius
sugar-cane and coconuts
are grown.

Tourism

Many people travel to islands for their holidays.

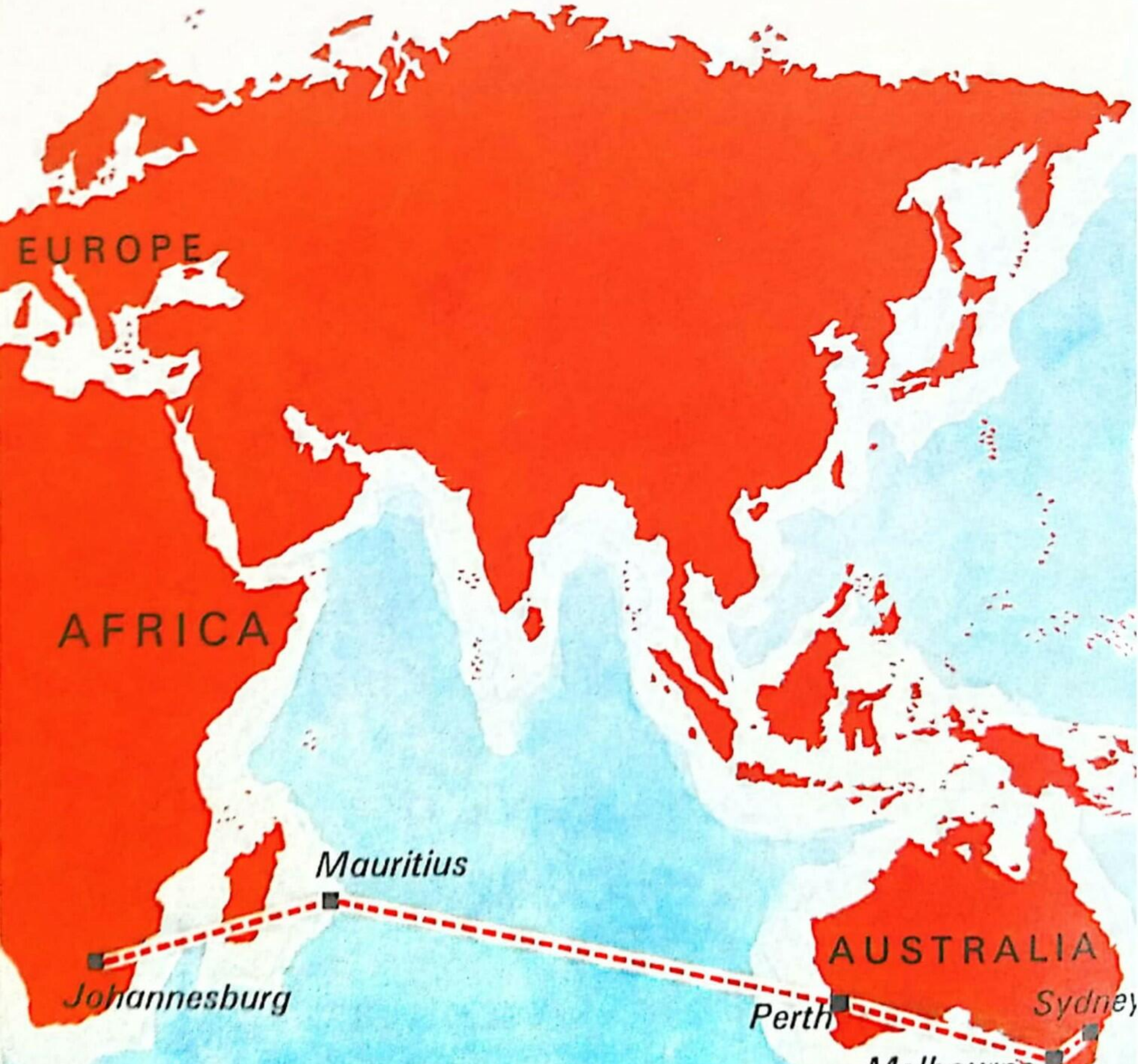
They enjoy fishing, boating and exploring.



Hundreds of thousands of people
each year travel from England
to Minorca and Majorca
and other Mediterranean islands.

Communications

Some islands are used by jet aircraft needing to refuel on long flights. Thus flights between Australia and Africa stop at Mauritius.





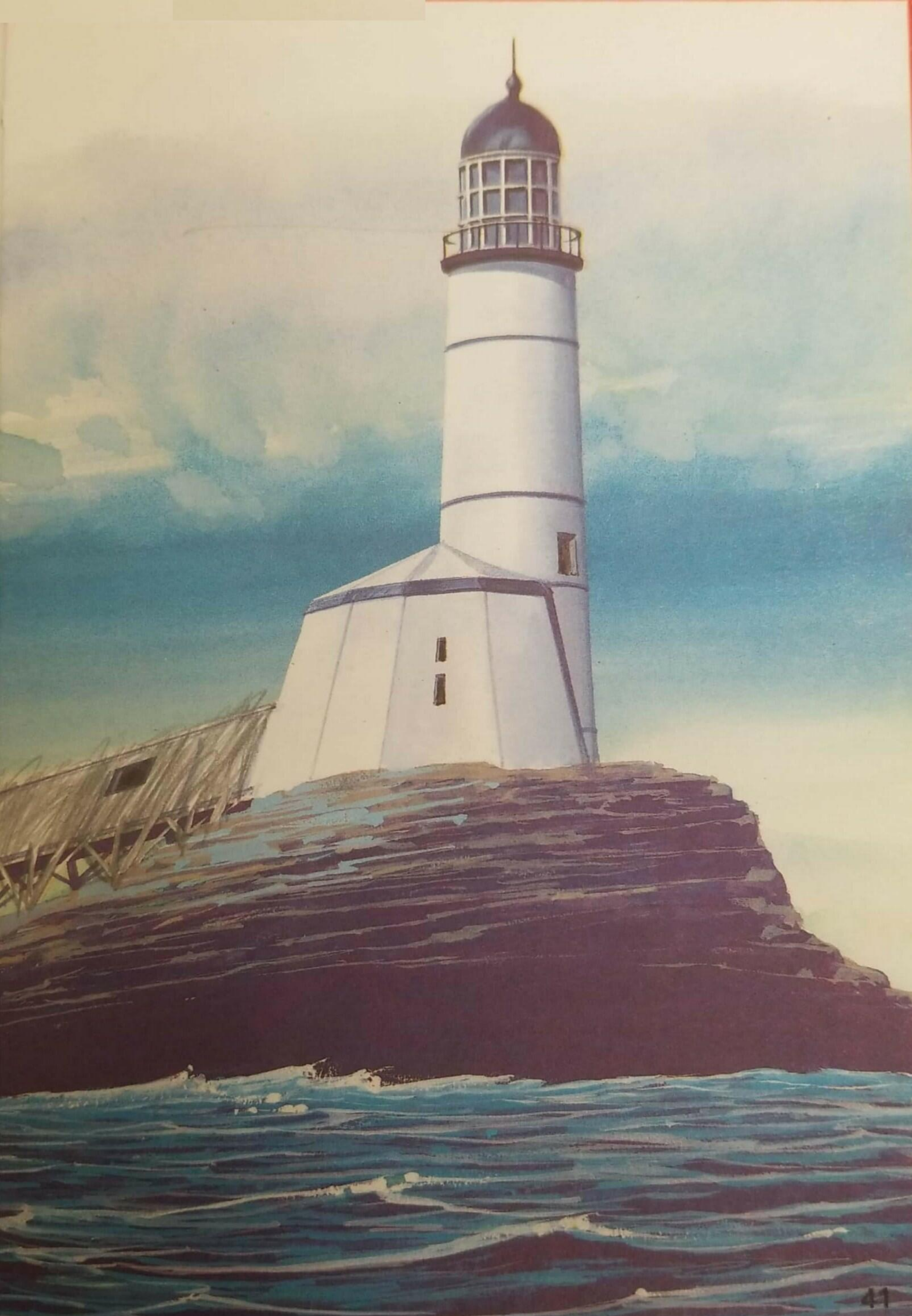
A few islands, like Tonga Island,
have cable and radio stations
which use satellites
to pass messages.

Lighthouses

Some islands are surrounded
by dangerous rocks.
Ships have to be warned
to keep clear,
so lighthouses have been built
as a warning.

*Isle of Shoals Lighthouse 8 km
off New Hampshire, on the East
coast of N. America, north of New York*







An island mystery

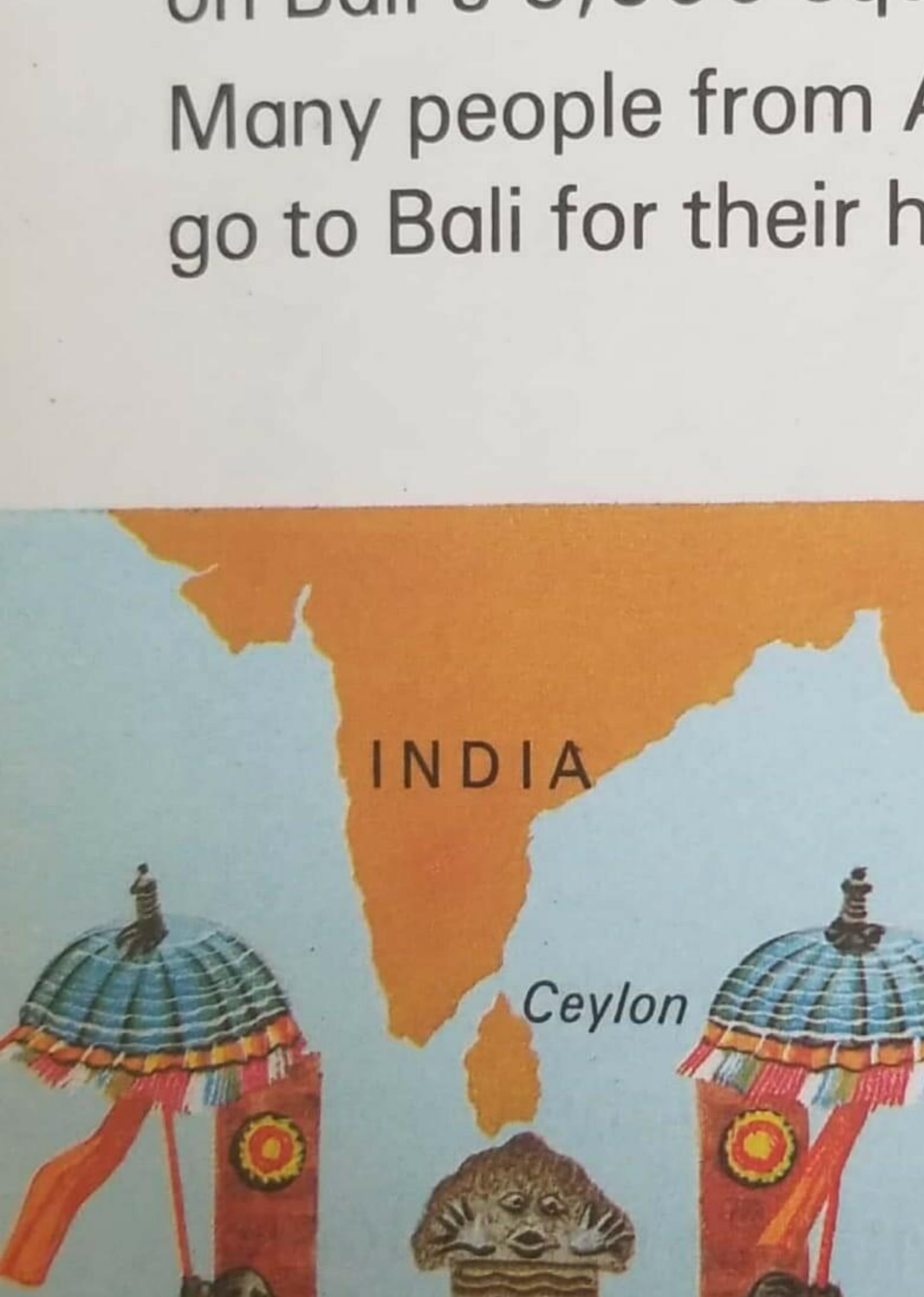
Easter Island is
a small volcanic island
in the Pacific Ocean
3200 kilometres
from South America.
On it are many strange statues.



They are 5-6 metres high
and weigh up to 50 tonnes.
They were cut without metal tools
hundreds of years ago.
Nobody knows why they were made
or how they were dragged
to where they stand.

A beautiful island

Bali is a small island in Indonesia
famous for its beautiful lakes,
volcanoes and beaches.
There are 20,000 temples
on Bali's 5,500 square kilometres.
Many people from Australia
go to Bali for their holidays.



Philippines

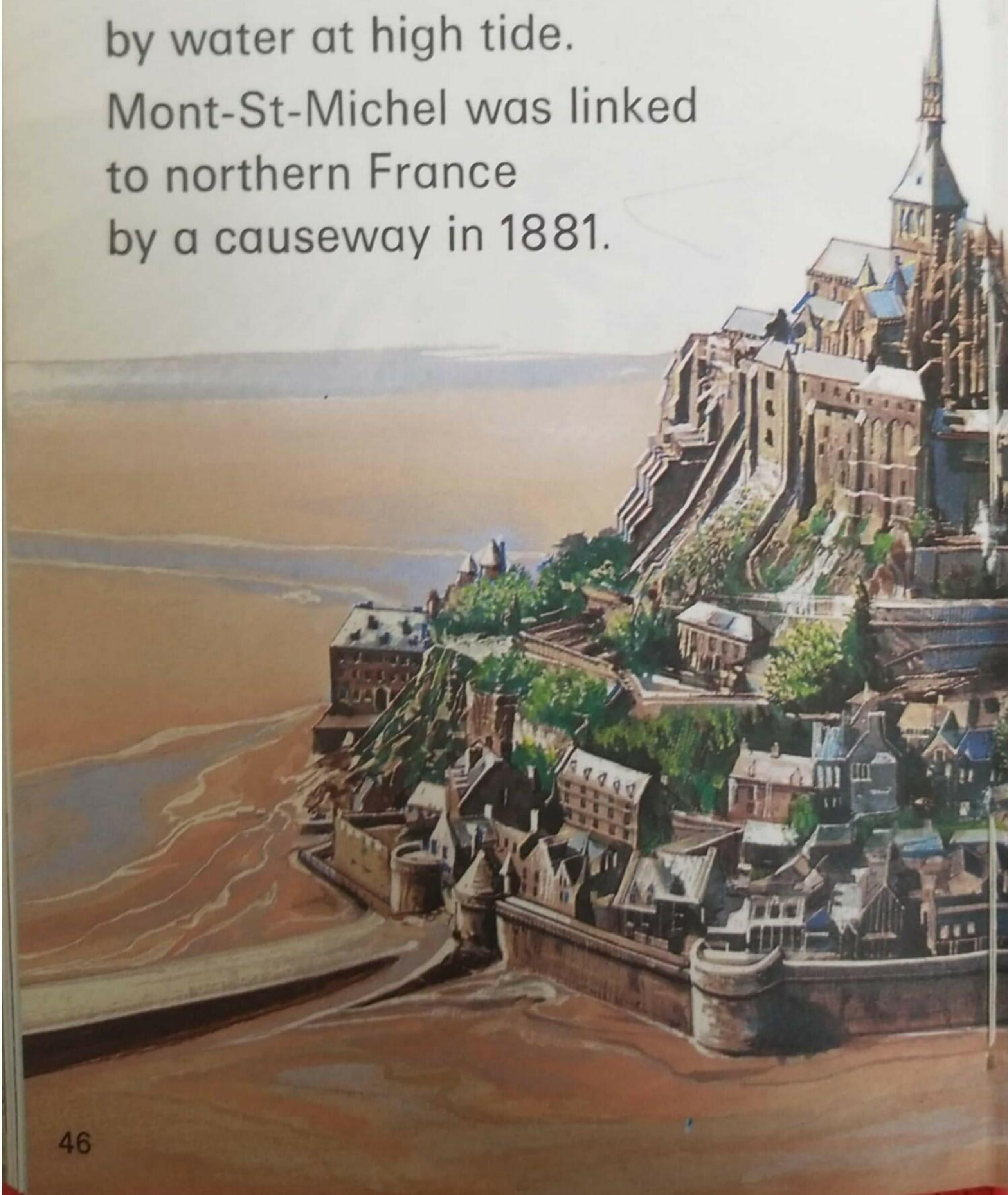
DONESIA

NEW
GUINEA

AUSTRALIA

Mont-St-Michel

Some islands can be reached
by causeways.
These roads are sometimes covered
by water at high tide.
Mont-St-Michel was linked
to northern France
by a causeway in 1881.

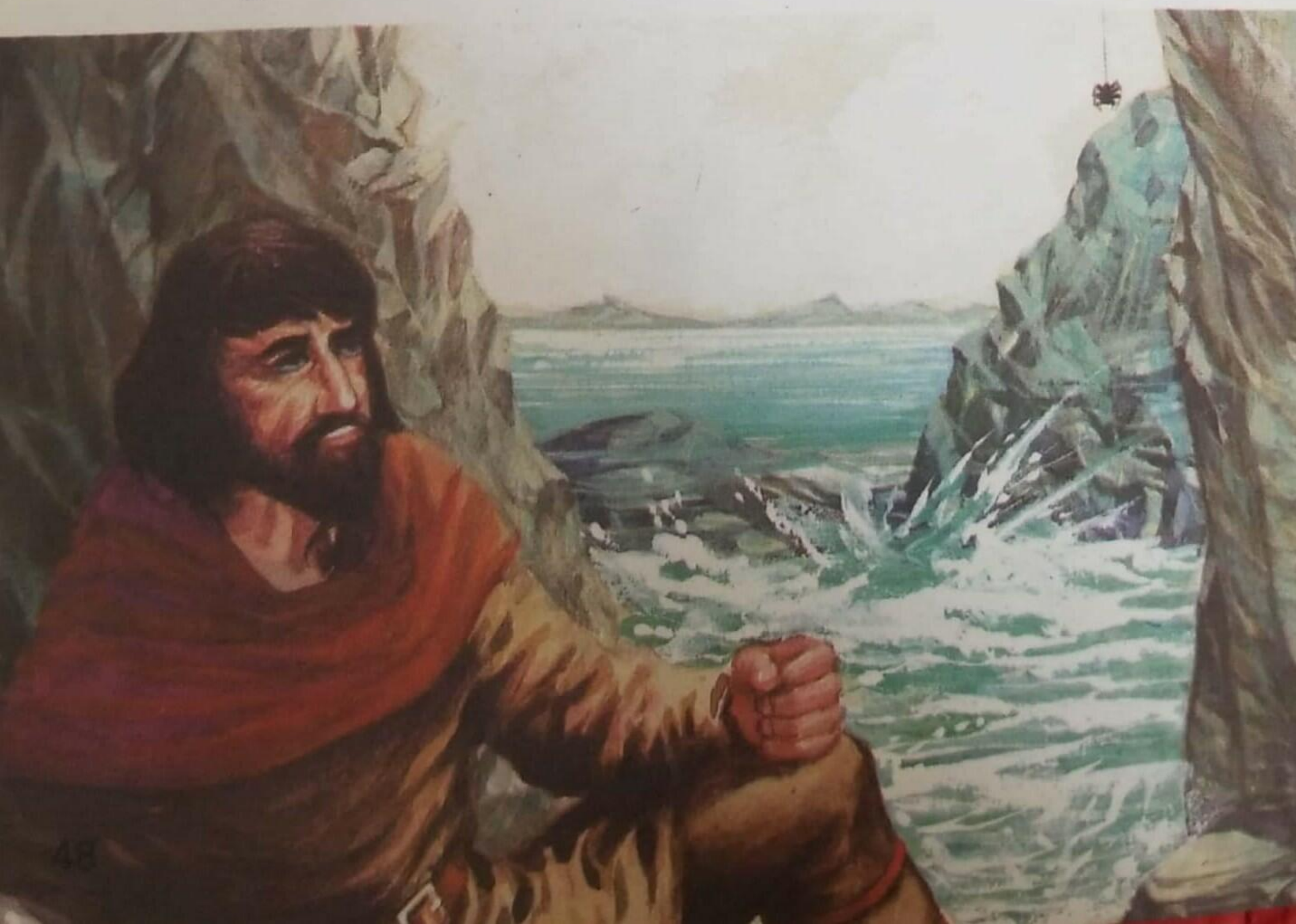


This small islet is the site
of an ancient monastery.
Before the road was built
people crossed to the island
by picking their way
between quicksands.



Rathlin

Rathlin is an L-shaped island
off the north coast of Ireland.
It has steep black and white cliffs.
It was in a cave on Rathlin Island
that Robert the Bruce
is said to have seen
a spider climb up a web
after falling several times.
This encouraged him
to return to Scotland
to fight his enemies once more.



The British Isles

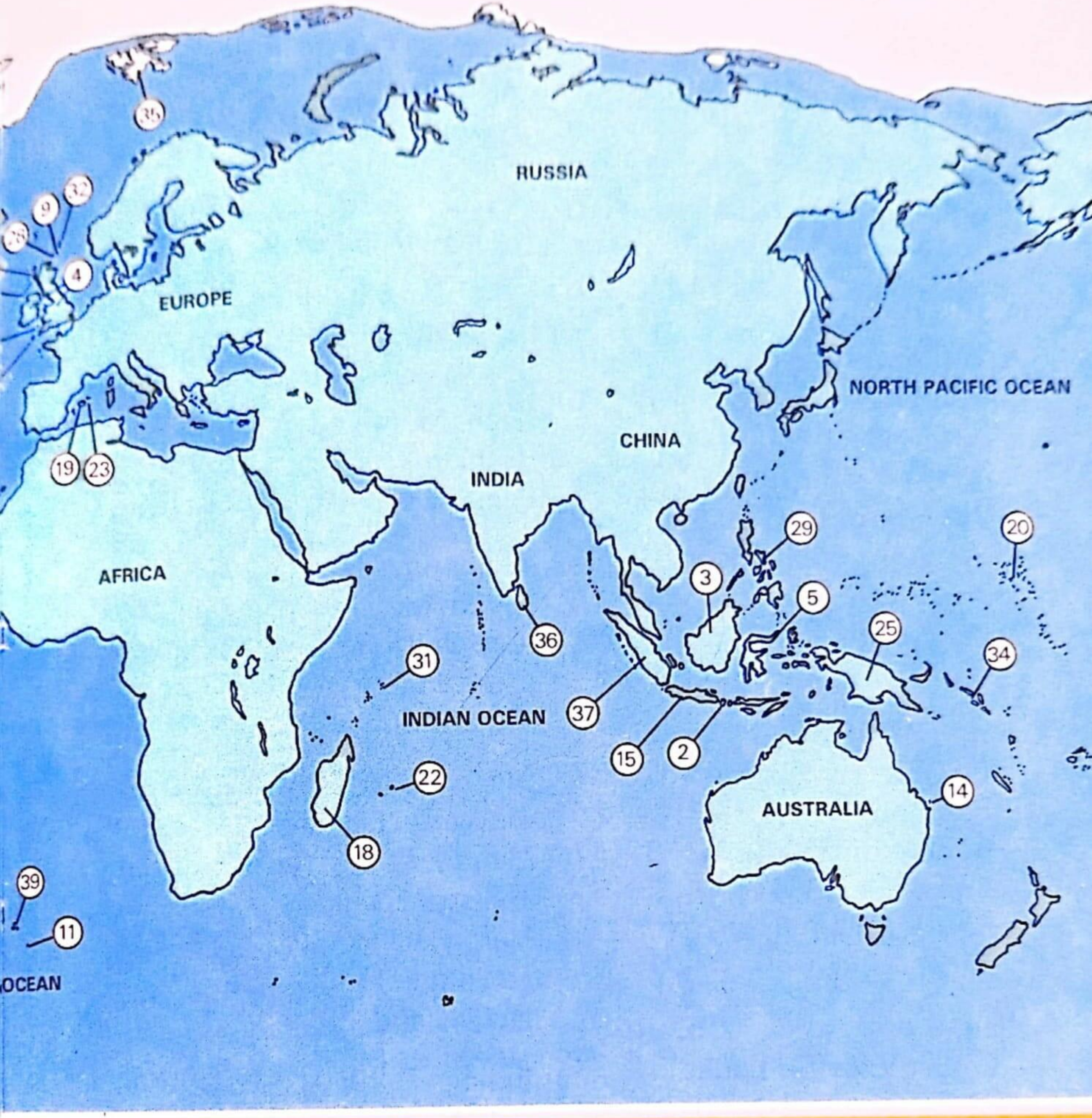
Two large islands
and several hundred
small ones
make up the
British Isles.



Some of the world's islands



1 Baffin Island
2 Bali
3 Borneo
4 British Isles
5 Celebes
6 Devon Island
7 Easter Island
8 Ellesmere Island
9 Fair Isle
10 Galapagos Islands
11 Gough Island
12 Hawaii
13 Hebrides
14 Heron Island
15 Java
16 Kauai
17 Lundy Island
18 Madagascar
19 Majorca
20 Marshall Islands



21 Maui
22 Mauritius
23 Minorca
24 Molokai
25 New Guinea
26 Niihau
27 Oahu
28 Orkney Islands
29 Philippines
30 Scilly Isles
31 Seychelles
32 Shetland Islands
33 Skye
34 Solomon Islands
35 Spitzbergen
36 Sri Lanka
37 Sumatra
38 Tonga
39 Tristan da Cunha
40 Victoria Island



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